a2

<110> MIZE, ET AL

<120> NOVEL INTERLEUKIN-1 HY2 MATERIALS AND METHODS

<130> 28110/36858A

<140> US 10/003,671
<141> 2001-11-02

<150> US 60/245,346
<151> 2000-11-02

<160> 26

<170> PatentIn version 3.1

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Cys Ser Leu Pro Met Ala Arg Tyr Tyr Ile Ile Lys Tyr Ala Asp Gln
            5   10   15

aag gct cta tac aca aga gat ggc cag ctg ctg gtg gga gat cct gtt   152
Lys Ala Leu Tyr Thr Arg Asp Gly Gln Leu Leu Val Gly Asp Pro Val
            20   25   30

gca gac aac tgc tgt gca gag aag atc tgc aca ctt cct aac aga ggc   200
Ala Asp Asn Cys Cys Ala Glu Lys Ile Cys Thr Leu Pro Asn Arg Gly
        35   40   45

ttg gac cgc acc aag gtc ccc att ttc ctg ggg atc cag gga ggg agc   248
Leu Asp Arg Thr Lys Val Pro Ile Phe Leu Gly Ile Gln Gly Gly Ser
50   55   60   65

cgc tgc ctg gca tgt gtg gag aca gaa gag ggg cct tcc cta cag ctg   296
Arg Cys Leu Ala Cys Val Glu Thr Glu Glu Gly Pro Ser Leu Gln Leu
            70   75   80

gag gat gtg aac att gag gaa ctg tac aaa ggt ggt gaa gag gcc aca   344
Glu Asp Val Asn Ile Glu Glu Leu Tyr Lys Gly Gly Glu Glu Ala Thr
            85   90   95

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cgc ttc acc ttc ttc cag agc agc tca ggc tcc gcc ttc agg ctt gag        392
Arg Phe Thr Phe Phe Gln Ser Ser Ser Gly Ser Ala Phe Arg Leu Glu
        100                 105                 110

gct gct gcc tgg cct ggc tgg ttc ctg tgt ggc ccg gca gag ccc cag        440
Ala Ala Ala Trp Pro Gly Trp Phe Leu Cys Gly Pro Ala Glu Pro Gln
        115                 120                 125

cag cca gta cag ctc acc aag gag agt gag ccc tca gcc cgt acc aag        488
Gln Pro Val Gln Leu Thr Lys Glu Ser Glu Pro Ser Ala Arg Thr Lys
130                 135                 140                 145

ttt tac ttt gaa cag agc tgg tag ggagacagga aactgcgttt tagccttgtg        542
Phe Tyr Phe Glu Gln Ser Trp
                150

cccccaaacc aagctcatcc tgctcagggt ctatggtagg cagaataatg tcccccgaaa        602

tatgtccaca tcctaatccc aagatctgtg catatgttac catacatgtc caaagaggtt        662

ttgcaaatgt gattatgtta aggatcttga aatgaggaga caatcctggg ttatccttgt        722

gggctcagtt taatcacaag aaggaggcag gaagggagag tcagagagag aatggaagat        782

accatgcttc taattttgaa gatggagtga ggggccttga gccaacatat gcaggtgttt        842

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Val Ala Asp Asn Cys Cys Ala Glu Lys Ile Cys Thr Leu Pro Asn Arg
            35              40              45


Gly Leu Asp Arg Thr Lys Val Pro Ile Phe Leu Gly Ile Gln Gly Gly
        50              55              60


Ser Arg Cys Leu Ala Cys Val Glu Thr Glu Glu Gly Pro Ser Leu Gln
65              70              75              80


Leu Glu Asp Val Asn Ile Glu Glu Leu Tyr Lys Gly Gly Glu Glu Ala
            85              90              95
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Thr Arg Phe Thr Phe Phe Gln Ser Ser Ser Gly Ser Ala Phe Arg Leu
       100   105   110

Glu Ala Ala Ala Trp Pro Gly Trp Phe Leu Cys Gly Pro Ala Glu Pro
       115   120   125

Gln Gln Pro Val Gln Leu Thr Lys Glu Ser Glu Pro Ser Ala Arg Thr
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Lys Phe Tyr Phe Glu Gln Ser Trp
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gca gga atg tgt tcc ctc ccc atg gca aga tac tac ata att aaa tat   95
Ala Gly Met Cys Ser Leu Pro Met Ala Arg Tyr Tyr Ile Ile Lys Tyr
             20   25   30

gca gac cag aag gct cta tac aca aga gat ggc cag ctg ctg gtg gga   143
Ala Asp Gln Lys Ala Leu Tyr Thr Arg Asp Gly Gln Leu Leu Val Gly
           35   40   45

gat cct gtt gca gac aac tgc tgt gca gag aag atc tgc aca ctt cct   191
Asp Pro Val Ala Asp Asn Cys Cys Ala Glu Lys Ile Cys Thr Leu Pro
         50   55   60

aac aga ggc ttg gac cgc acc aag gtc ccc att ttc ctg ggg atc cag   239
Asn Arg Gly Leu Asp Arg Thr Lys Val Pro Ile Phe Leu Gly Ile Gln
      65   70   75

gga ggg agc cgc tgc ctg gca tgt gtg gag aca gaa gag ggg cct tcc   287
Gly Gly Ser Arg Cys Leu Ala Cys Val Glu Thr Glu Glu Gly Pro Ser
80   85   90   95

cta cag ctg gag gat gtg aac att gag gaa ctg tac aaa ggt ggt gaa   335
Leu Gln Leu Glu Asp Val Asn Ile Glu Glu Leu Tyr Lys Gly Gly Glu
           100   105   110

gag gcc aca cgc ttc acc ttc ttc cag agc agc tca ggc tcc gcc ttc   383
Glu Ala Thr Arg Phe Thr Phe Phe Gln Ser Ser Ser Gly Ser Ala Phe
           115   120   125

agg ctt gag gct gct gcc tgg cct ggc tgg ttc ctg tgt ggc ccg gca   431
Arg Leu Glu Ala Ala Ala Trp Pro Gly Trp Phe Leu Cys Gly Pro Ala
          130   135   140

a2

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    145             150             155

cgt acc aag ttt tac ttt gaa cag agc tgg tag ggagacagga aactgcgttt     532
Arg Thr Lys Phe Tyr Phe Glu Gln Ser Trp
160             165

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tcccccgaaa tatgtccaca tcctaatccc aagatctgtg catatgttac catacatgtc     652

caaagaggtt ttgcaaatgt gattatgtta aggatcttga aatgaggaga caatcctggg     712

ttatccttgt gggctcagtt taatcacaag aaggaggcag gaagggagag tcagagagag     772

aatggaagat accatgcttc taattttgaa gatggagtga ggggccttga gccaacatat     832

gcaggtgttt ttagaaggag gaaaagccaa gggaacggat tctcctctat agtctccgga     892

aggaacacag ctcttgacac atggatttca gctcagtgac acccatttca gacttctgac     952

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<213> Homo sapiens

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Asp Gln Lys Ala Leu Tyr Thr Arg Asp Gly Gln Leu Leu Val Gly Asp
        35              40              45

Pro Val Ala Asp Asn Cys Cys Ala Glu Lys Ile Cys Thr Leu Pro Asn
    50              55              60

Arg Gly Leu Asp Arg Thr Lys Val Pro Ile Phe Leu Gly Ile Gln Gly
65              70              75              80

Gly Ser Arg Cys Leu Ala Cys Val Glu Thr Glu Glu Gly Pro Ser Leu
            85              90              95

Gln Leu Glu Asp Val Asn Ile Glu Glu Leu Tyr Lys Gly Gly Glu Glu
            100             105             110

Ala Thr Arg Phe Thr Phe Phe Gln Ser Ser Ser Gly Ser Ala Phe Arg
            115             120             125
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G2 Leu Glu Ala Ala Ala Trp Pro Gly Trp Phe Leu Cys Gly Pro Ala Glu
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Pro Gln Gln Pro Val Gln Leu Thr Lys Glu Ser Glu Pro Ser Ala Arg
145   150   155   160

Thr Lys Phe Tyr Phe Glu Gln Ser Trp
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         20   25   30

Ala Gly Lys Val Ile Lys Gly Glu Glu Ile Ser Val Val Pro Asn Arg
         35   40   45

Trp Leu Asp Ala Ser Leu Ser Pro Val Ile Leu Gly Val Gln Gly Gly
     50   55   60

Ser Gln Cys Leu Ser Cys Gly Val Gly Gln Glu Pro Thr Leu Thr Leu
65   70   75   80

Glu Pro Val Asn Ile Met Glu Leu Tyr Leu Gly Ala Lys Glu Ser Lys
             85   90   95

Ser Phe Thr Phe Tyr Arg Arg Asp Met Gly Leu Thr Ser Ser Phe Glu
         100   105   110

Ser Ala Ala Tyr Pro Gly Trp Phe Leu Cys Thr Val Pro Glu Ala Asp
         115   120   125

Gln Pro Val Arg Leu Thr Gln Leu Pro Glu Asn Gly Gly Trp Asn Ala
    130   135   140

Pro Ile Thr Asp Phe Tyr Phe Gln Gln Cys Asp
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<212> PRT
<213> Rattus rattus

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α2

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Pro Cys Lys Met Gln Ala Phe Arg Ile Trp Asp Thr Asn Gln Lys Thr
        35   40   45

Phe Tyr Leu Arg Asn Asn Gln Leu Ile Ala Gly Tyr Leu Gln Gly Pro
    50   55   60

Asn Thr Lys Leu Glu Glu Lys Ile Asp Met Val Pro Ile Asp Phe Arg
65   70   75   80

Asn Val Phe Leu Gly Ile His Gly Gly Lys Leu Cys Leu Ser Cys Val
                85   90   95

Lys Ser Gly Asp Asp Thr Lys Leu Gln Leu Glu Glu Val Asn Ile Thr
            100   105   110

Asp Leu Asn Lys Asn Lys Glu Glu Asp Lys Arg Phe Thr Phe Ile Arg
        115   120   125

Ser Glu Thr Gly Pro Thr Thr Ser Phe Glu Ser Leu Ala Cys Pro Gly
    130   135   140

Trp Phe Leu Cys Thr Thr Leu Glu Ala Asp His Pro Val Ser Leu Thr
145   150   155   160

Asn Thr Pro Lys Glu Pro Cys Thr Val Thr Lys Phe Tyr Phe Gln Glu
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Asp Gln

<210>   7
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<212>   PRT
<213>   Sus scrofa

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Phe Leu Phe His Ser Glu Thr Ala Cys His Pro Leu Gly Lys Arg Pro
            20   25   30

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Cys Arg Met Gln Ala Phe Arg Ile Trp Asp Val Asn Gln Lys Thr Phe
        35   40   45

Tyr Leu Arg Asn Asn Gln Leu Val Ala Gly Tyr Leu Gln Gly Pro Asn
        50   55   60

Thr Lys Leu Glu Glu Lys Ile Asp Val Val Pro Val Glu Pro His Phe
65   70   75   80

Val Phe Leu Gly Ile His Gly Gly Lys Leu Cys Leu Ser Cys Val Lys
                85   90   95

Ser Gly Asp Glu Met Lys Leu Gln Leu Asp Ala Val Asn Ile Thr Asp
            100   105   110

Leu Arg Lys Asn Ser Glu Gln Asp Lys Arg Phe Thr Phe Ile Arg Ser
        115   120   125

Asp Ser Gly Pro Thr Thr Ser Phe Glu Ser Ala Ala Cys Pro Gly Trp
    130   135   140

Phe Leu Cys Thr Ala Leu Glu Ala Asp Gln Pro Val Gly Leu Thr Asn
145   150   155   160

Thr Pro Lys Ala Ala Val Lys Val Thr Lys Phe Tyr Phe Gln Gln Asp
            165   170   175

Gln

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<213> Homo sapiens

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1   5   10   15

Phe Leu Phe His Ser Glu Thr Ile Cys Arg Pro Ser Gly Arg Lys Ser
            20   25   30

Ser Lys Met Gln Ala Phe Arg Ile Trp Asp Val Asn Gln Lys Thr Phe
        35   40   45

Tyr Leu Arg Asn Asn Gln Leu Val Ala Gly Tyr Leu Gln Gly Pro Asn
        50   55   60

α2

Val Asn Leu Glu Glu Lys Ile Asp Val Val Pro Ile Glu Pro His Ala
65   70   75   80

Leu Phe Leu Gly Ile His Gly Gly Lys Met Cys Leu Ser Cys Val Lys
                85   90   95

Ser Gly Asp Glu Thr Arg Leu Gln Leu Glu Ala Val Asn Ile Thr Asp
            100   105   110

Leu Ser Glu Asn Arg Lys Gln Asp Lys Arg Phe Ala Phe Ile Arg Ser
        115   120   125

Asp Ser Gly Pro Thr Thr Ser Phe Glu Ser Ala Ala Cys Pro Gly Trp
    130   135   140

Phe Leu Cys Thr Ala Met Glu Ala Asp Gln Pro Val Ser Leu Thr Asn
145   150   155   160

Met Pro Asp Glu Gly Val Met Val Thr Lys Phe Tyr Phe Gln Glu Asp
            165   170   175

Glu

<210> 9
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<212> PRT
<213> Homo sapiens

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Met Ala Leu Glu Thr Ile Cys Arg Pro Ser Gly Arg Lys Ser Ser Lys
1   5   10   15

Met Gln Ala Phe Arg Ile Trp Asp Val Asn Gln Lys Thr Phe Tyr Leu
            20   25   30

Arg Asn Asn Gln Leu Val Ala Gly Tyr Leu Gln Gly Pro Asn Val Asn
        35   40   45

Leu Glu Glu Lys Ile Asp Val Val Pro Ile Glu Pro His Ala Leu Phe
    50   55   60

Leu Gly Ile His Gly Gly Lys Met Cys Leu Ser Cys Val Lys Ser Gly
65   70   75   80

Asp Glu Thr Arg Leu Gln Leu Glu Ala Val Asn Ile Thr Asp Leu Ser
            85   90   95

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Glu Asn Arg Lys Gln Asp Lys Arg Phe Ala Phe Ile Arg Ser Asp Ser
        100   105   110

Gly Pro Thr Thr Ser Phe Glu Ser Ala Ala Cys Pro Gly Trp Phe Leu
        115   120   125

Cys Thr Ala Met Glu Ala Asp Gln Pro Val Ser Leu Thr Asn Met Pro
    130   135   140

Asp Glu Gly Val Met Val Thr Lys Phe Tyr Phe Gln Glu Asp Glu
145   150   155

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<210> 11
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acttgctccc ggatagcctc agtcagggag aggcagagct gcctggagcc tgctgggctg   240

gtggaagcct tggtggattc tggcaggcca attatagatg aatggcctgg ggaacccgtg   300

cagcccgtgg ctgagtggtt ctaagcccca gcacgtctgc ctctggcttc acccagcctc   360

cttttctaac tgcccttctc tcctccccat cagtgaggac cagacaccac tgattgcagg   420

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atacacaaga gacggccagc tgctggtggg agatcctgtt gcagacaact gctgtgcaga   540

-9-

a2

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gaagatctgc acacttccta acagaggctt ggaccgcacc aaggtcccca ttttcctggg    600

gatccaggga gggagccgct gcctggcatg tgtggagaca aagaggggc cttccctaca    660

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ctcagcccgt accaagtttt actttgaaca gagctggtag ggagacagga aactgcgttt    900

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caaagaggtt ttgcaaatgt gattatgtta aggatcttga aatgaggaga caatcctggg    1080

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            20                  25                  30


Pro Ser Leu Leu Pro Ile Ser Glu Asp Gln Thr Pro Leu Ile Ala Gly
            35                  40                  45


Met Cys Ser Leu Pro Met Ala Arg Tyr Tyr Ile Ile Lys Tyr Ala Asp
        50              55                  60


Gln Lys Ala Leu Tyr Thr Arg Asp Gly Gln Leu Leu Val Gly Asp Pro
65                  70              75                  80


Val Ala Asp Asn Cys Cys Ala Glu Lys Ile Cys Thr Leu Pro Asn Arg
                85                  90                  95


Gly Leu Asp Arg Thr Lys Val Pro Ile Phe Leu Gly Ile Gln Gly Gly
            100                 105                 110
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a2 Ser Arg Cys Leu Ala Cys Val Glu Thr Glu Glu Gly Pro Ser Leu Gln
        115   120   125

    Leu Glu Asp Val Asn Ile Glu Glu Leu Tyr Lys Gly Gly Glu Glu Ala
        130   135   140

    Thr Arg Phe Thr Phe Phe Gln Ser Ser Ser Gly Ser Ala Phe Arg Leu
    145   150   155   160

    Glu Ala Ala Ala Trp Pro Gly Trp Phe Leu Cys Gly Pro Ala Glu Pro
                    165   170   175

    Gln Gln Pro Val Gln Leu Thr Lys Glu Ser Glu Pro Ser Ala Arg Thr
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    Lys Phe Tyr Phe Glu Gln Ser Trp
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    acttgctccc ggatagcctc agtcagggag aggcagagct gcctggagcc tgctgggctg   240

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gagtaacata tctatgtatg tgtctctatg tgtggattta aatagaatta cagtgtacac   780

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atttcttagc caattaccta ttactgaaaa ttcagatttt tttcaacttc ttgctattgt   960

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ccaatgggtg ttcattttag ggaagagctc taggacagga taacccatcg ggaaggagca    1620

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-14-

α2

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<211> 4388
<212> DNA
<213> Mus musculus

<400> 16
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-16-

G2

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<211> 459
<212> DNA
<213> Mus musculus

<400> 17
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-17-

<210> 18
<211> 152
<212> PRT
<213> Mus musculus

<400> 18

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            20   25   30

Asp Ser Asp Asn Tyr Ser Pro Glu Lys Val Cys Ile Leu Pro Asn Arg
            35   40   45

Gly Leu Asp Arg Ser Lys Val Pro Ile Phe Leu Gly Met Gln Gly Gly
    50   55   60

Ser Cys Cys Leu Ala Cys Val Lys Thr Arg Glu Gly Pro Leu Leu Gln
65   70   75   80

Leu Glu Asp Val Asn Ile Glu Asp Leu Tyr Lys Gly Gly Glu Gln Thr
                85   90   95

Thr Arg Phe Thr Phe Phe Gln Arg Ser Leu Gly Ser Ala Phe Arg Leu
            100   105   110

Glu Ala Ala Ala Cys Pro Gly Trp Phe Leu Cys Gly Pro Ala Glu Pro
            115   120   125

Gln Gln Pro Val Gln Leu Thr Lys Glu Ser Glu Pro Ser Thr His Thr
    130   135   140

Glu Phe Tyr Phe Glu Met Ser Arg
145   150

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<212> DNA
<213> Artificial sequence

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<223> Primer

<400> 19
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<210> 20
<211> 26
<212> DNA
<213> Artificial sequence

az

<220>
<223> Primer

<400> 20
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<210> 21
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<212> PRT
<213> Homo sapiens

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            20   25   30

Leu Glu Glu Lys Ile Asp Val Val Pro Ile Glu Pro His Ala Leu Phe
            35   40   45

Leu Gly Ile His Gly Gly Lys Met Cys Leu Ser Cys Val Lys Ser Gly
            50   55   60

Asp Glu Thr Arg Leu Gln Leu Glu Ala Val Asn Ile Thr Asp Leu Ser
65   70   75   80

Glu Asn Arg Lys Gln Asp Lys Arg Phe Ala Phe Ile Arg Ser Asp Ser
                85   90   95

Gly Pro Thr Thr Ser Phe Glu Ser Ala Ala Cys Pro Gly Trp Phe Leu
            100   105   110

Cys Thr Ala Met Glu Ala Asp Gln Pro Val Ser Leu Thr Asn Met Pro
            115   120   125

Asp Glu Gly Val Met Val Thr Lys Phe Tyr Phe Gln Glu Asp Glu
    130   135   140

<210> 22
<211> 146
<212> PRT
<213> Homo sapiens

<400> 22
Ala Arg Tyr Tyr Ile Ile Lys Tyr Ala Asp Gln Lys Ala Leu Tyr Thr
1   5   10   15

Arg Asp Gly Gln Leu Leu Val Gly Asp Pro Val Ala Asp Asn Cys Cys
            20   25   30

-19-

_α2_ Ala Glu Lys Ile Cys Ile Leu Pro Asn Arg Gly Leu Asp Arg Thr Lys
        35   40   45

Val Pro Ile Phe Leu Gly Ile Gln Gly Gly Ser Arg Cys Leu Ala Cys
    50   55   60

Val Glu Thr Glu Glu Gly Pro Ser Leu Gln Leu Glu Asp Val Asn Ile
65   70   75   80

Glu Glu Leu Tyr Lys Gly Gly Glu Glu Ala Thr Arg Phe Thr Phe Phe
                85   90   95

Gln Ser Ser Ser Gly Ser Ala Phe Arg Leu Glu Ala Ala Ala Trp Pro
            100   105   110

Gly Trp Phe Leu Cys Gly Pro Ala Glu Pro Gln Gln Pro Val Gln Leu
            115   120   125

Thr Lys Glu Ser Glu Pro Ser Ala Arg Thr Lys Phe Tyr Phe Glu Gln
    130   135   140

Ser Trp
145

<210>   23
<211>   151
<212>   PRT
<213>   Homo sapiens

<400>   23
Val Arg Ser Leu Asn Cys Thr Leu Arg Asp Ser Gln Gln Lys Ser Leu
1   5   10   15

Val Met Ser Gly Pro Tyr Glu Leu Lys Ala Leu His Leu Gln Gly Gln
            20   25   30

Asp Met Glu Gln Gln Val Val Phe Ser Met Ser Phe Val Gln Gly Glu
            35   40   45

Glu Ser Asn Asp Lys Ile Pro Val Ala Leu Gly Leu Lys Glu Lys Asn
    50   55   60

Leu Tyr Leu Ser Cys Val Leu Lys Asp Asp Lys Pro Thr Leu Gln Leu
65   70   75   80

Glu Ser Val Asp Pro Lys Asn Tyr Pro Lys Lys Lys Met Glu Lys Arg
                85   90   95

-20-

@2

Phe Val Phe Asn Lys Ile Glu Ile Asn Asn Lys Leu Glu Phe Glu Ser
            100   105   110

Ala Gln Phe Pro Asn Trp Tyr Ile Ser Thr Ser Gln Ala Glu Asn Met
            115   120   125

Pro Val Phe Leu Gly Gly Thr Lys Gly Gly Gln Asp Ile Thr Asp Phe
    130   135   140

Thr Met Gln Phe Val Ser Ser
145   150

<210>   24
<211>   148
<212>   PRT
<213>   Homo sapiens

<400>   24
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1   5   10   15

Tyr Thr Arg Asp Gly Gln Leu Leu Val Gly Asp Pro Val Ala Asp Asn
            20   25   30

Cys Cys Ala Glu Lys Ile Cys Ile Leu Pro Asn Arg Gly Leu Asp Arg
            35   40   45

Thr Lys Val Pro Ile Phe Leu Gly Ile Gln Gly Gly Ser Arg Cys Leu
    50   55   60

Ala Cys Val Glu Thr Glu Glu Gly Pro Ser Leu Gln Leu Glu Asp Val
65   70   75   80

Asn Ile Glu Glu Leu Tyr Lys Gly Gly Glu Glu Ala Thr Arg Phe Thr
            85   90   95

Phe Phe Gln Ser Ser Ser Gly Ser Ala Phe Arg Leu Glu Ala Ala Ala
            100   105   110

Trp Pro Gly Trp Phe Leu Cys Gly Pro Ala Glu Pro Gln Gln Pro Val
            115   120   125

Gln Leu Thr Lys Glu Ser Glu Pro Ser Ala Arg Thr Lys Phe Tyr Phe
    130   135   140

Glu Gln Ser Trp
145

a2

<210> 25
<211> 28
<212> DNA
<213> Artificial sequence

<220>
<223> Primer

<400> 25
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<210> 26
<211> 37
<212> DNA
<213> Artificial sequence

<220>
<223> Primer

<400> 26
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